

US EPA RECORDS CENTER REGION 5



466793

Monthly Oversight Report 12  
ACS NPL Site  
Griffith, Indiana  
December 1 - December 28, 2001



# BLACK & VEATCH

101 N. Wacker Drive  
Suite 1100  
Chicago, Illinois 60606-7302

Tel: (312) 346-3775  
Fax: (312) 346-4781

Black & Veatch Special Projects Corp.

USEPA/RAC VII  
American Chemical Services RAO (057-ROBF-05J7)

BVSPC Project 46526  
BVSPC File C.3  
January 9, 2002

Mr. Kevin Adler  
U.S. Environmental Protection Agency  
77 W. Jackson Boulevard (SR-6J)  
Chicago, Illinois 60604-3590

Subject: Monthly Oversight Summary Report  
No. 12 for December 2001

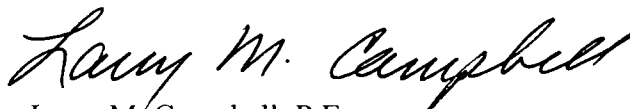
Dear Mr. Adler:

Enclosed is the Monthly Oversight Summary Report No. 12 for December 2001 for the American Chemical Services Superfund Site in Griffith, Indiana.

If you have any questions, please call (312-683-7856) or email ([campbelllm@bv.com](mailto:campbelllm@bv.com)).

Sincerely,

BLACK & VEATCH Special Projects Corp.

  
Larry M. Campbell, P.E.  
Site Manager

Enclosure

t:\projects\acs-raos\corresp\let-020.doc

**Monthly Oversight Summary Report No. 12**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Month of December (December 1 - December 28, 2001)

**BVSPC O/S Dates:** December 4, 6, 11, 13, 18, 20, and 27, 2001

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	7	Respondent's General Contractor
U.S. Environmental Protection Agency	1	
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Austgen	2	Electrical Contractor
Heritage Industrial Services	7	OFCA ISVE Yard Piping Contractor
Oilind Safety	2	Safety Equipment Contractor
Patrick Engineering	1	Clay Compaction Testing
Slusser's	7	Landscape Contractor

**Construction Activities**

**Major Activities:**

- Heritage Industrial Services completed the Off-Site Containment Area in-situ soil vapor extraction system piping installation.
- Austgen repaired electrical conduit damaged by Heritage Industrial Services on the Off-Site Containment Area.
- Patrick Engineering conducted compaction testing on the backfilled area located north of the Off-Site Containment Area blower shed.
- Austgen began repairs to the fiber optic cable from the Groundwater Treatment Plant to the Off-Site Containment Area blower shed.
- Slusser's placed sod near Off-Site Containment Area extraction well EW-20C.
- Montgomery Watson Harza installed the blower in the Off-Site Containment Area blower shed.
- Montgomery Watson Harza held an open house on December 13, 2001.

- Montgomery Watson Harza held weekly construction coordination meetings on December 6, 13, and 20, 2001, and canceled the weekly construction coordination meeting on December 27, 2001, because of construction inactivity at the site.

**Activities Performed:**

Heritage Industrial Services (HIS) straightened the coiled piping for the Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) system on December 4, 2001. HIS began trenching activities on December 5, 2001, in the OFCA area. HIS wore Level D personal protective equipment (PPE) during trenching activities. Montgomery Watson Harza (MWH) reported that HIS damaged the buried electrical conduit that ran from the OFCA blower shed to extraction well EW-20C during trenching activities on December 5, 2001. HIS damaged the conduit at the trenches for ISVE wells SVE-36 and SVE-34. Austgen had previously marked the location of the conduit, and MWH turned off the power in the line as a precaution. Austgen repaired the damaged electrical conduit the following week.

Black & Veatch Special Projects Corp. (BVSPC) observed HIS trench and install piping for the eastern trunk of the ISVE system on the OFCA on December 6, 2001. When HIS began trenching activities within the clay cover for the eastern trunk of the OFCA, it initially planned to split the piping for the eastern trunk into two sections: one section that would connect to the eastern-most wells; and a second section that would follow the crown of the cover and connect to the western-most wells. HIS proposed this plan in order to ensure that sloping to the wells would be achieved. After HIS began trenching for this plan, it realized that it would not be feasible to lay the piping in two separate sections without the piping overlapping and crossing because of the order of the pipe connections at the OFCA blower shed. Therefore, HIS decided to lay the piping in accordance with the original design. As HIS trenched farther north along the eastern trunk on December 6, 2001, it began excavating through the clay cover into the underlying native material in order to achieve the appropriate slope to the wells. HIS began monitoring the trench with a photo-ionization detector (PID). When HIS excavated into the native material, the PID reading spiked at 25 ppm and returned to 0 ppm. As soon as HIS observed the reading on the PID, it immediately ceased excavation activities in order to upgrade its PPE.

HIS hired the operator and the laborer working on the excavation and trenching activities from the local union. These individuals were 40-hour trained and had medical clearance for respirator use; however, they were not fit-tested and did not have respirators on-site. HIS hired Oilind Safety to perform fit-testing for these individuals and to provide respirators on December 6, 2001. Oilind Safety was on-site performing the fit testing that afternoon. Once these activities were complete, the laborer upgraded to Level C PPE with a full-face respirator and the operator wore a half-mask respirator during excavation activities. HIS reported that the PID routinely spiked at 25 ppm and returned to 0 ppm as it excavated into the native materials. HIS was not prepared to establish an exclusion zone and contaminant reduction zone during trenching activities.

BVSPC observed MWH hold the weekly safety meeting for its contractors on December 6, 2001. During this meeting, MWH discussed the importance of PPE, monitoring, and being prepared to eliminate the potential for exposure at the site. All of the HIS employees attended this meeting. The HIS field manager reported that he did not anticipate working within the native materials. He also reported that he may have



a dedicated Health and Safety manager at the site to ensure that air monitoring activities were being conducted and that the appropriate means of protection were being followed. In addition, HIS stated that they would begin holding morning tool-box safety meetings on December 7, 2001, as required by MWH.

BVSPC contacted USEPA on December 7, 2001, regarding the site activities and lack of preparedness on behalf of HIS during trenching activities. BVSPC also forwarded comments summarizing the site observations to USEPA on December 7, 2001. MWH reported that it had received comments from the USEPA and BVSPC regarding the lack of preparedness during the OFCA ISVE yard piping installation activities. These comments were addressed by MWH and discussed at the weekly construction coordination meeting. Toby Parish of HIS was brought to the site to serve as the dedicated Health and Safety Manager throughout the remainder of the OFCA ISVE yard piping installation. BVSPC attended the morning tool-box health and safety meeting conducted by Mr. Parish for the HIS laborers and operator on December 11, 2001.

BVSPC observed HIS inert the ISVE wells in order to connect the saddles for the piping installation. HIS used a "muni-ball" plug to seal the well below the saddle connection point. Once the saddles were connected and sealed, HIS removed the "muni-ball" and replaced the cap on the well. HIS performed pressure testing on the lines prior to installation. HIS was required to maintain 50 psi of pressure for a minimum of 5 minutes in the lines for the pressure test.

On Thursday, December 13, 2001, MWH reported that HIS observed elevated PID readings in the OFCA blower shed. MWH reported that the PID readings were approximately 30 ppm. MWH concluded that vapors were being carried through the piping from the connected wells into the OFCA blower shed. MWH opened the doors on the blower shed to ventilate the blower shed. MWH placed caps on the well connections inside the blower shed to contain the vapors in the piping once the PID readings inside of the OFCA blower shed returned to 0 ppm.

! ISVE  
WORKING  
ALREADY!

BVSPC observed HIS construct the land bridge over OFCA swale 5. HIS placed a piece of 8-inch-diameter culvert piping underneath the land bridge in order to provide drainage in the swale. For the Kapica-Pazmey (K-P) area piping, the blower shed will serve as the lowest point of the yard piping. During trenching activities, HIS kept the piping at zero grade with the blower shed connections across the land bridge to the K-P area. HIS continued at zero grade through the clay cover until it encountered native material. As soon as the native material was encountered, HIS increased the grade in order to stay at the base of the clay cover. HIS reported that the PID detected a reading of 0.2 ppm during the trenching activities at the top of the native material. HIS replaced some of the clay in order to cover the native material to minimize the potential for vapors. HIS did not detect any other readings with the PID. MWH had three truckloads of clay brought to the site to serve as cover for the ISVE piping that was placed on existing grade in the K-P area. HIS completed rolling the clay in the K-P area on December 21, 2001; however, compaction and moisture testing were not performed at that time.

On December 20, 2001, BVSPC observed Chris Daly of MWH recording the location of the K-P wells using a global positioning system. HIS completed connecting all of the ISVE wells. HIS backfilled and compacted the excavations in the area north of the OFCA blower shed and the K-P area. HIS filled the

void beneath the piping at the blower shed with a flow-fill slurry mixture. HIS backfilled the trenches at the air sparge wells located to the north of the OFCA blower shed. The clay was not compacted at the OFCA blower shed; however, MWH stated that 12 inches of compacted clay cover are located underneath the blower shed piping and compaction requirements are not required for the clay located on top of the piping as part of the cover requirements. MWH reported that Patrick Engineering, a subcontractor for HIS, conducted compaction and moisture testing on December 21, 2001, for the area located north of the OFCA blower shed. Patrick Engineering did not test the compaction in the K-P area. MWH reported that HIS will return in the spring to complete compaction and testing requirements.

MWH reported that the fiber optic cable that runs from the groundwater treatment plant (GWTP) to the OFCA blower shed was damaged by Austgen during installation. Austgen tried to remove the broken cable from the conduit; however, the cable broke again and could not be removed in its entirety. MWH reported that some of the cable remains in the conduit and must be removed prior to running a second cable. MWH continues to investigate remedial actions to repair the cable.

BVSPC observed Slusser's place sod near extraction well EW-20C located on the OFCA. Tom Tinics of MWH stated that Slusser's did not appropriately groom the topsoil in the vicinity of extraction well EW-20C prior to laying the sod. Slusser's returned to the site and rolled the sod in order to improve the grading and grooming near extraction well EW-20C.

MWH installed the blower in the OFCA blower shed. MWH reported that the oxidizer is scheduled for delivery to the site at the end of January.

MWH reported that it ceased operating the GWTP in recirculation mode and resumed discharging to the wetlands through drainage structures 2 and 3. MWH temporarily stopped pumping from the OFCA extraction wells until HIS completed its OFCA ISVE yard piping installation activities. MWH continued to pump from the perimeter groundwater containment system and the On-Site Containment Area (ONCA) extraction wells. MWH began pumping from OFCA extraction wells EW-11, EW-19, EW-20B, and EW-20C after HIS completed the OFCA ISVE yard piping installation. MWH measured the water level at the ONCA extraction wells and began taking water level measurements at the OFCA ISVE wells. MWH reported that it is detecting free product in the OFCA ISVE wells and will try to measure the thickness of product in the wells.

Attached are BVSPC weekly reports No. 40 through 43, correspondence, log book notes, and photographs of the daily activities. BVSPC's crew conducted oversight of the major field activities on December 4, 6, 11, 13, 18, 20, and 27, 2001. BVSPC's crew attended three weekly construction meetings on December 6, 13 and 20, 2001. MWH did not hold a construction meeting on December 27, because of construction inactivity at the site.

**Topics of Concern:**

- MWH was unable to obtain a groundwater elevation at monitoring well MW-18 due to debris in the well. MW-18 is part of the long term monitoring program.
- Installation of the abandonment casing around ATMW-4D is suspect as to its effectiveness

because the outer casing was driven in with the kelly bar and the auger chuck. Driving the casing down does not allow the tremmie pipe to reach the bottom of the annulus space on the outside of the casing for proper grouting.

- The residential well located at 1007 Reder Road could not be sampled because the pump was not operating. This well is part of the long term monitoring program.

**Concern Resolution:**

- MWH submitted to USEPA and BVSPC the transmittal *Response to concern over the abandonment procedures for monitoring well ATMW4D - American Chemical Service (ACS) NPL Site, Griffith, Indiana*, dated November 30, 2001. Based on BVSPC's review of this document, ATMW4D was adequately abandoned and this concern has been addressed.
- MWH proposed to replace MW-18 with MW-17 in the *Revised Long-Term Groundwater Monitoring Plan*. MWH will abandon MW-18 in accordance with the Indiana Administrative Code.

**Upcoming Activities:**

- MWH to re-install the fiber optic cable from the GWTP to the OFCA blower shed.
- MWH to install oxidizer for the OFCA ISVE system.

Signature: Leigh Peters

Date: December 31, 2001

*T:\projects\acs-raos\osr\2001\11\Mo12.wpd*

**Weekly Oversight Summary Report No. 40**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Week of December 3, 2001

**BVSPC O/S Dates:** December 4 and 6, 2001 (Ms. Peters)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	6	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Heritage Industrial Services	6	OFCA ISVE Yard Piping Contractor
Oilind Safety	2	Safety Equipment Contractor
Slusser's	7	Landscape Contractor

**Construction Activities**

**Major Activities:**

- Heritage Industrial Services began Off-Site Containment Area in-situ soil vapor extraction system piping installation.
- Slusser's placed sod near Off-Site Containment Area extraction well EW-20C.
- Montgomery Watson Harza held the weekly construction coordination meeting.

**Activities Performed:**

Heritage Industrial Services (HIS) straightened the coiled piping for the Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) system on December 4, 2001. HIS began trenching activities on December 5, 2001, in the OFCA area. HIS wore Level D personal protective equipment (PPE) during trenching activities. Montgomery Watson Harza (MWH) reported that HIS damaged the buried electrical conduit that ran from the OFCA blower shed to extraction well EW-20C during trenching activities on December 5, 2001. HIS damaged the conduit at the trenches for ISVE wells SVE-36 and SVE-34. Austgen had previously marked the location of the conduit, and MWH turned off the power in the line as a precaution. MWH reported that Austgen will repair the damaged conduit the following week.

Black & Veatch Special Projects Corp. (BVSPC) observed HIS trench and install piping for the eastern trunk of the ISVE system on the OFCA on December 6, 2001. When HIS began trenching activities within the clay cover for the eastern trunk of the OFCA, it initially planned to split the piping for the eastern trunk into two sections: one section that would connect to the eastern-most wells; and a second section that would follow the crown of the cover and connect to the western-most wells. HIS proposed this plan in order to ensure that sloping to the wells would be achieved. After HIS began trenching for this plan, it

realized that it would not be feasible to lay the piping in two separate sections without the piping overlapping and crossing because of the order of the pipe connections at the OFCA blower shed. Therefore, HIS decided to lay the piping in accordance with the original design. As HIS trenched farther north along the eastern trunk on December 6, 2001, it began excavating through the clay cover into the underlying native material in order to achieve the appropriate slope to the wells. HIS began monitoring the trench with a photo-ionization detector (PID). When HIS excavated into the native material, the PID reading spiked at 25 ppm and returned to 0 ppm. As soon as HIS observed the reading on the PID, it immediately ceased excavation activities in order to upgrade its PPE.

HIS hired the operator and the laborer working on the excavation and trenching activities from the local union. These individuals were 40-hour trained and had medical clearance for respirator use; however, they were not fit-tested and did not have respirators on-site. HIS hired Oilind Safety to perform fit-testing for these individuals and to provide respirators on December 6, 2001. Oilind Safety was on-site performing the fit testing that afternoon. Once these activities were complete, the laborer upgraded to Level C PPE with a full-face respirator and the operator wore a half-mask respirator during excavation activities. HIS reported that the PID routinely spiked at 25 ppm and returned to 0 ppm as it excavated into the native materials. HIS was not prepared to establish an exclusion zone and contaminant reduction zone during trenching activities. HIS placed the material that was excavated below the clay cover onto visqueen and covered the material at the end of the day with additional visqueen.

BVSPC observed HIS begin inerting the ISVE wells in order to connect the saddles for the piping installation. HIS used a "muni-ball" plug to seal the well below the saddle connection point. Once the saddles were connected and sealed, HIS removed the "muni-ball" and replaced the cap on the well. HIS will perform pressure testing on the lines prior to installation. HIS is required to maintain 50 psi of pressure for a minimum of 5 minutes in the lines for the pressure test.

HIS did not hold morning tool-box safety meetings until Friday, December 7, 2001. MWH required that the contractor hold routine morning safety meetings and document their occurrence.

BVSPC observed MWH hold the weekly safety meeting for its contractors on December 6, 2001. During this meeting, MWH discussed the importance of PPE, monitoring, and being prepared to eliminate the potential for exposure at the site. All of the HIS employees attended this meeting. The HIS field manager reported that he did not anticipate working within the native materials. He also reported that he may have a dedicated Health and Safety manager at the site to ensure that air monitoring activities were being conducted and that the appropriate means of protection were being followed.

MWH reported that the grout and bentonite had settled around OFCA ISVE wells SVE-25 and SVE-41. MWH did not know how deep the grout had settled; however, it reported that the wells would be regouted and repaired as part of the OFCA ISVE yard piping installation activities.

BVSPC contacted USEPA on December 7, 2001, regarding the site activities and lack of preparedness on behalf of HIS during trenching activities. BVSPC also forwarded comments summarizing the site observations to USEPA on December 7, 2001.

BVSPC observed Slusser's place sod near extraction well EW-20C located on the OFCA. Tom Tinics of MWH stated that Slusser's did not appropriately groom the topsoil in the vicinity of extraction well EW-20C prior to laying the sod. Slusser's returned to the site and rolled the sod in order to improve the grading and grooming near extraction well EW-20C.

MWH reported that the plastic and visqueen from the OFCA ISVE well installation that had been placed in the American Chemical Services, Inc. On-Site Containment Area (ONCA) firepond were removed and placed in MWH's hazardous waste roll-off box located in the groundwater treatment plant (GWTP) for future off-site disposal.

MWH reported that it stopped operating the GWTP in recirculation mode and resumed discharging to the wetlands through drainage structures 2 and 3. MWH reported that it has temporarily stopped pumping from the OFCA extraction wells until HIS has completed its OFCA ISVE yard piping installation activities. MWH continued to pump from the ONCA extraction wells.

MWH held the weekly construction coordination meeting on December 6, 2001.

#### **Topics of Concern:**

- MWH was unable to obtain a groundwater elevation at monitoring well MW-18 due to debris in the well. MW-18 is part of the long term monitoring program.
- Installation of the abandonment casing around ATMW4D is suspect as to its effectiveness because the outer casing was driven in with the kelly bar and the auger chuck. Driving the casing down does not allow the tremmie pipe to reach the bottom of the annulus space on the outside of the casing for proper grouting.
- The residential well located at 1007 Reder Road could not be sampled because the pump was not operating. This well is part of the long term monitoring program.

#### **Concern Resolution:**

- MWH submitted to USEPA and BVSPC the transmittal *Response to concern over the abandonment procedures for monitoring well ATMW4D - American Chemical Service (ACS) NPL Site, Griffith, Indiana*, dated November 30, 2001. Based on BVSPC's review of this document, ATMW4D was adequately abandoned and this concern has been addressed.
- MWH proposed to replace MW-18 with MW-17 in the *Revised Long-Term Groundwater Monitoring Plan*. MWH will abandon MW-18 in accordance with the Indiana Administrative Code.

#### **Upcoming Activities:**

- HIS to continue OFCA ISVE yard piping activities.

Signature: Leigh Peters

Date: December 17, 2001

t:\projects\acs-raos\osr\2001\12\1203.wpd

**WEEKLY CONSTRUCTION MEETING AGENDA  
FOR DECEMBER 6, 2001 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** December 6, 2001

**MEETING TIME:** 10:00 AM

**MEETING LOCATION:** ACS Site – Site Trailer

**TOPICS:**

Health and Safety Summary (Tom Tinics)

GWTP Status (Lee Orosz)

Barrier Wall Extraction Systems (BWES) Updates (Chris Daly or Todd Lewis)

- Slusser – completion of sod.

In-Situ Vapor Extraction (ISVE) System – Off-Site Area (Todd Lewis/HIS)

- Yard piping installation by Heritage Industrial Services
- Anticipated schedule

Drum Disposal Activities (Todd Lewis)

- Summary of Activities
- Manifests

ORC<sup>®</sup> South Area Pilot Study (Todd Lewis)

- Sixth and final sampling round – November 29 and 30, 2001

Looking Ahead (Todd Lewis)

- Site Hours during Holiday Season

Next Weekly Construction Meeting

- Thursday, December 13, 2001 (Meeting 10am; Christmas Open House 12-5pm)

Name	Company	Fax Number
Lough Peters	BVSPC	312-346-4781
Scott Healy	HIS.	
Duke Trenkamp	HIS.	317-541-9436
Chris Daly	MWH	630-836-8959
TRAVIS KLINGFORTH	MWH	"
PETER VAGT	MWH	630 836 8959
TOM J. TOPICS	MWH	
TODD LEWIS	MWH	
LEE DROSZ	MWH	
Kevin Adler	(via phone) U.S.E.P.A.	



**WEEKLY CONSTRUCTION MEETING MINUTES  
FOR DECEMBER 6, 2001 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** December 6, 2001

**MEETING TIME:** 10:00 AM

**MEETING LOCATION:** ACS Site – Site Trailer

**ATTENDEES:**

Chris Daly – MWH  
Travis Klingforth – MWH  
Todd Lewis – MWH  
Lee Orosz – MWH  
Tom Tinics – MWH  
Peter Vagt – MWH  
Kevin Adler – U.S.EPA (via phone)  
Leigh Peters – BVSPC  
Scott Hemly – HIS  
Duke Trenkamp – HIS

**TOPICS:**

Health and Safety Summary

Heritage Industrial Services (HIS) staff went through site specific health and safety training on November 29, 2001. HIS has not yet documented regular daily health and safety meetings, though they will begin doing so on December 7, 2001.

HIS encountered an underground electrical conduit that connects the blower shed and the Barrier Wall Extracation Wells on December 6, 2001. The electrical lines in the conduit had been turned off for safety; therefore there were no injuries. The lines will be repaired. No other health and safety issues occurred during the past week.

HIS were reminded that no smoking will take place inside the Off-Site Area, even in vehicles, and safety glasses will be worn at all times inside the Off-Site Area.

Groundwater Treatment Plant (GWTP) Status

The GWTP continues to operate normally. The GWTP resumed discharging to the wetlands on December 3, 2001 after a routine change-out of the carbon in the granular activated carbon (GAC) filters. The power to the Off-Site Area was turned off on December 3, 2001 to eliminate the potential for electrical contact during the ISVE installation activities scheduled to be completed by HIS. When power is turned on again

in the Off-Site Area, influent flow to the GWTP will resume at 50 gallons per minute (gpm). Currently, the treatment flow is 25 gpm.

#### Barrier Wall Extraction Systems (BWES) Upgrades

Slusser Company re-sodded the area around extraction well EW-20C on December 4, 2001. To correct the meeting minutes from the November 29, 2001 meeting, extraction well EW-13A was not on-line. Also, influent water was being pumped from MW-56, not MW-54. The BWES upgrades are now complete and this item will be removed from future meeting agenda.

#### In-Situ Vapor Extraction (ISVE) System – Off-Site Area

HIS has performed three days of yard piping installation to date. The remainder of the job, including line trenching, well connection, and compaction testing is still expected to last three weeks.

#### Drum Disposal Activities

Onyx Environmental Services has confirmed that all material shipped to their Port Arthur, Texas facility for disposal is in conformance with the waste profiles that had been established. Manifests continue to be received from Onyx for the material contained in roll-off boxes.

#### ORC® South Area Pilot Study

The sixth and final sampling round of the South Area Pilot Study was conducted on November 29 and 30, 2001. After the final analytical data is received from the laboratory, a summary report will be prepared. The field work for this item is now complete and it will be removed from future meeting agendas.

#### Looking Ahead

No work will take place on the site on December 24, 25, and 31, 2001 or January 1, 2002 due to the holiday season. The regular working schedule will resume on January 2, 2002.

#### Next Weekly Construction Meeting

The next weekly construction meeting is scheduled for Thursday, December 13, 2001. The meeting is scheduled for 10 am, and the Holiday Open House will follow from noon to 5 pm.

TMK/RAA/TAL/PJV

J:\209\0601 ACS\0202 MWA PM\Meeting Minutes 12-6-01.doc

**Weekly Oversight Summary Report No. 41**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Week of December 10, 2001

**BVSPC O/S Dates:** December 11 and 13, 2001 (Ms. Peters)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	7	Respondent's General Contractor
U.S. Environmental Protection Agency	1	
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Heritage Industrial Services	7	OFCA ISVE Yard Piping Contractor
Austgen	2	Electrical Contractor

### **Construction Activities**

#### **Major Activities:**

- Heritage Industrial Services continued Off-Site Containment Area in-situ soil vapor extraction system piping installation.
- Austgen repaired electrical conduit on the Off-Site Containment Area.
- Montgomery Watson Harza held an open house on December 13, 2001.
- Montgomery Watson Harza held the weekly construction coordination meeting.

#### **Activities Performed:**

Heritage Industrial Services (HIS) continued installing the Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) system piping. Toby Parish of HIS was brought to the site to serve as the dedicated Health and Safety Manager throughout the remainder of the OFCA ISVE yard piping installation. Black & Veatch Special Projects Corp. (BVSPC) attended the morning tool-box health and safety meeting conducted by Mr. Parish for the HIS laborers and operator on December 11, 2001. Chris Daly of Montgomery Watson Harza (MWH) reported that HIS did not conduct any additional trenching activities on December 7, 2001. Mr. Daly also reported that HIS connected 6 of the ISVE wells and pressure tested the piping on December 10, 2001.

BVSPC observed HIS construct the land bridge over OFCA swale 5. HIS placed a piece of 8-inch-diameter culvert piping underneath the land bridge in order to provide drainage in the swale. HIS will place the OFCA ISVE yard piping for the Kapica-Pazmey area on top of the land bridge. HIS will cover any piping placed on existing grade with clay.

HIS excavated the trench for the central trunk of the OFCA ISVE wells located to the north of the OFCA blower shed. BVSPC observed Mr. Parish conduct continuous air monitoring with a photo-ionization detector (PID). HIS did not observe any elevated readings on the PID during trenching activities. HIS continued to trench within the clay layer. When placing the piping for the central trunk of the OFCA ISVE wells, the piping for SVE-13 crossed underneath the piping to the remaining eight ISVE wells for the central trunk. HIS was not able to lay the piping for SVE-13 without crossing under the other pipes because of the numbering system at the OFCA blower shed.

HIS had replaced most of the clay that was removed during trenching activities for the eastern trunk. HIS did not replace the clay at the excavations for the air sparge points. HIS did not connect the air sparge points because MWH has not received the saddles for these wells. MWH reported that HIS has not compacted the backfilled clay.

MWH reported that HIS placed bentonite around ISVE wells SVE-25 and SVE-41 to fill the void where the grout had settled. HIS sealed the saddle and piping connection to the wells with hydrated bentonite.

On Thursday, December 13, 2001, MWH reported that HIS observed elevated PID readings in the OFCA blower shed. MWH reported that the PID readings were approximately 30 ppm. MWH concluded that vapors were being carried through the piping from the connected wells into the OFCA blower shed. MWH opened the doors on the blower shed to ventilate the blower shed. MWH placed caps on the well connections inside the blower shed to contain the vapors in the piping once the PID readings inside of the OFCA blower shed returned to 0 ppm.

MWH reported that Austgen repaired the electrical conduit located between the OFCA blower shed and extraction well EW-20C that had been damaged by HIS during piping installation activities.

MWH reported that extraction well EW-10 was not operating for approximately 10 hours because of crossed electrical wires. MWH reported that Austgen repaired the electrical connections and pumping from the well resumed. MWH continued to pump from the perimeter groundwater containment system and the On-Site Containment Area (ONCA) extraction wells. MWH began studying the water levels in the ONCA and pumping rates for dewatering.

MWH reported that a MWH corporate Health and Safety Officer performed a general audit on its facilities on December 13, 2001. MWH stated that no deficiencies were found during the audit. MWH also reported that it had received comments from the USEPA and BVSPC regarding the lack of preparedness during the OFCA ISVE yard piping installation activities during the previous week. These comments were addressed by MWH and discussed at the weekly construction coordination meeting.

MWH held the weekly construction coordination meeting on December 13, 2001. MWH also held an open house after the weekly construction coordination meeting.

**Topics of Concern:**

- MWH was unable to obtain a groundwater elevation at monitoring well MW-18 due to debris in the well. MW-18 is part of the long term monitoring program.
- The residential well located at 1007 Reder Road could not be sampled because the pump was not operating. This well is part of the long term monitoring program.

**Concern Resolution:**

- MWH proposed to replace MW-18 with MW-17 in the *Revised Long-Term Groundwater Monitoring Plan*. MWH will abandon MW-18 in accordance with the Indiana Administrative Code.

**Upcoming Activities:**

- HIS to complete OFCA ISVE yard piping activities.

Signature: Leigh Peters

Date: December 24, 2001

t:\projects\acs-raos\osr\2001\12\1210.wpd

**WEEKLY CONSTRUCTION MEETING AGENDA  
FOR DECEMBER 13, 2001 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** December 13, 2001

**MEETING TIME:** 10:00 AM

**MEETING LOCATION:** ACS Site – Site Trailer

**TOPICS:**

Health and Safety Summary (Tom Tinics)

GWTP Status (Lee Orosz)

In-Situ Vapor Extraction (ISVE) System – Off-Site Area (Todd Lewis/HIS)

- Yard piping installation by Heritage Industrial Services
- Anticipated schedule

Drum Disposal Activities (Todd Lewis)

- Summary of Activities
- Manifests

Looking Ahead (Todd Lewis)

- Site Hours during Holiday Season

Next Weekly Construction Meeting

- Thursday, December 20, 2001

**SIGN IN SHEET**  
**WEEKLY CONSTRUCTION METING**  
**DECEMBER 13, 2001**

Name	Company	Fax Number
ROBERT ADAMS	MWH	630-836-8959
CHRIS DALY	MWH	"
LEE OROSZ	MWH	219 924 4561
PETER VAGT	MWH	630/836-8959
Leigh Peters	BVSPC	312-346-4781
Kevin Adler	EPA	312-353-5541
Toby Parish	HIS	317-541-9436
SCOTT Hamly	HIS	317-541-9436
Travis Kling	MWH	
TOM TINKLES	MWH	

**WEEKLY CONSTRUCTION MEETING MINUTES  
FOR DECEMBER 13, 2001 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** December 13, 2001

**MEETING TIME:** 10:00 AM

**MEETING LOCATION:** ACS Site - Site Trailer

**ATTENDEES:**

Robert Adams - MWH  
Chris Daly - MWH  
Travis Klingforth - MWH  
Lee Orosz - MWH  
Tom Tinics - MWH  
Peter Vagt - MWH  
Kevin Adler - U.S.EPA  
Leigh Peters - BVSPC  
Scott Hernly - HIS  
Toby Parish - HIS

**TOPICS:**

Health and Safety Summary

Michael Grasso, an MWH corporate health and safety officer, visited the site on the morning of December 13, 2001 and performed a regularly scheduled site health and safety audit. No deficiencies were noted.

During the weekly construction meeting, Tom Tinics addressed various health and safety issues discussed regarding the work of Heritage Industrial Services (HIS). Many of these issues were also included in a recent memo sent by Black & Veatch and the U.S. EPA to MWH on December 7, 2001. The topics in the memo included HIS' use of exclusion zones and daily toolbox health and safety meetings, and the process of respirator fit testing for local union laborers. The issues raised in the memo had also concerned MWH, who resolved many of them in a separate meeting with HIS on December 6, 2001. Since that meeting, MWH has worked with HIS to continue to improve their overall health and safety performance. As of December 12, 2001 HIS has brought on site a full-time health and safety officer.

Groundwater Treatment Plant (GWTP) Status

The GWTP continues to operate normally. The power to the Off-Site Area was turned off on December 3, 2001 to eliminate the potential for electrical contact during the ISVE installation activities scheduled to be completed by HIS. Power was turned on again in



the Off-Site Area on December 12, 2001, and the Off-Site Area extraction wells are scheduled resume pumping on December 14, 2001. The GWTP continues to discharge through wetlands discharge structures 2 and 3.

#### In-Situ Vapor Extraction (ISVE) System - Off-Site Area

HIS has completed approximately 33% of the yard piping installation as of December 13, 2001. MWH is conducting quality assurance to confirm that the piping pressure testing and piping slopes are performed and installed according to design. The remainder of the job, including line trenching, well connection, and compaction testing is expected to last one to two more weeks.

The memo mentioned above sent by Black & Veatch and the U.S. EPA on December 7, 2001 also addressed the design of the ISVE conveyance piping. The topics in the memo included the submittal of HIS' work plan, the design of pipe slopes, and the proposed use of a land-bridge over the swale immediately south of the blower shed. Tom Tinics also briefly addressed these issues. He confirmed that the conveyance piping is being installed as designed in the Final Remedy and the use of a land-bridge over the drainage swale will be considered in the final cap design. Rob Adams stated that HIS was using the implementation plan included in their proposal and that a separate work plan was not developed. Black & Veatch confirmed that they had received the proposal.

#### Drum Disposal Activities

Onyx Environmental Services has confirmed that all material shipped to their Port Arthur, Texas facility for disposal is in conformance with the waste profiles that had been established. No more activities are scheduled to occur on the site. Manifests continue to be received from Onyx for the material contained in roll-off boxes.

#### Looking Ahead

No work will take place on the site on December 24, 25, and 31, 2001 or January 1, 2002 due to the holiday season. The regular working schedule will resume on January 2, 2002.

#### Next Weekly Construction Meeting

The next weekly construction meeting is scheduled for Thursday, December 20, 2001.

TMK/PJV/TAL/RAA

J:\209\0601 ACS\0202 MWA PM\Meeting Minutes 12-13-01.doc

**Weekly Oversight Summary Report No. 42**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Week of December 17, 2001

**BVSPC O/S Dates:** December 18 and 20, 2001 (Ms. Peters)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	5	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Heritage Industrial Services	7	OFCA ISVE Yard Piping Contractor
Patrick Engineering	1	Clay Compaction Testing
Austgen	1	Electrical Contractor

**Construction Activities**

**Major Activities:**

- Heritage Industrial Services completed Off-Site Containment Area in-situ soil vapor extraction system piping installation.
- Patrick Engineering conducted compaction testing on the backfilled area located north of the Off-Site Containment Area blower shed.
- Austgen began repairs to the fiber optic cable from the Groundwater Treatment Plant to the Off-Site Containment Area blower shed.
- Montgomery Watson Harza held the weekly construction coordination meeting.

**Activities Performed:**

Heritage Industrial Services (HIS) completed installing the Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) system piping. Black & Veatch Special Projects Corp. (BVSPC) observed HIS excavate the trenches in the Kapica-Pazmey (K-P) area located south of the OFCA blower shed on December 18, 2001. For the K-P area piping, the blower shed will serve as the lowest point of the yard piping. HIS observed that the piping from the OFCA blower shed for the K-P area is located further west than illustrated in the drawings submitted by MWH. Instead of the main trench to the K-P area extending to SVE-9, the piping extends to SVE-3 from the OFCA blower shed.

During trenching activities, HIS kept the piping at zero grade with the blower shed connections across the land bridge to the K-P area. HIS continued at zero grade through the clay cover until it encountered native material. As soon as the native material was encountered, HIS increased the grade in order to stay at the base of the clay cover. HIS reported that the photo-ionization detector (PID) detected a reading of 0.2

ppm during the trenching activities at the top of the native material. HIS replaced some of the clay in order to cover the native material to minimize the potential for vapors. HIS did not detect any other readings with the PID.

BVSPC observed HIS install the piping connections at the OFCA ISVE wells on December 18, 2001. During installation activities, BVSPC observed that HIS was not conducting air monitoring at the well. BVSPC reminded MWH that the well must be inerted and air monitoring is required during saddle and piping connection activities at the well. MWH reported that they would speak with the HIS Health and Safety Manager to ensure that these activities were being performed. HIS indicated that they will pick up a second "muni-ball" plug for inerting the wells and will perform continuous air monitoring during well connection activities.

On December 20, 2001, BVSPC observed Chris Daly of MWH recording the location of the K-P wells using a global positioning system. HIS completed connecting all of the ISVE wells. HIS backfilled and compacted the excavations in the area north of the OFCA blower shed and the K-P area. MWH had three truckloads of clay brought to the site to serve as cover for the ISVE piping that was placed on existing grade in the K-P area. HIS completed rolling the clay in the K-P area on December 21, 2001; however, compaction and moisture testing were not performed at that time. HIS filled the void beneath the piping at the blower shed with a flow-fill slurry mixture. MWH reported that the slurry did not set up on Friday due to the weather; therefore, HIS could not backfill with clay at the OFCA blower shed. HIS was not able to backfill or compact the clay around the air sparge wells. MWH reported that Patrick Engineering, a subcontractor for HIS, conducted compaction and moisture testing on December 21, 2001, for the area located north of the OFCA blower shed. Whether the clay cover passes the compaction requirements will be determined by the proctor that MWH uses for comparison. Patrick Engineering did not test the compaction in the K-P area. MWH reported that HIS will return in the spring to complete compaction and testing requirements.

MWH continued to pump from all of the On-Site Containment Area (ONCA) extraction wells and began pumping from OFCA extraction wells EW-11, EW-19, EW-20B, and EW-20C. MWH reported that the Perimeter Groundwater Containment System was operating in automatic mode. MWH continued to take water level measurements at the ONCA extraction wells and began taking water level measurements at the OFCA ISVE wells. MWH reported that it is detecting free product in the OFCA ISVE wells and will try to measure the thickness of product in the wells.

MWH reported that the fiber optic cable that runs from the groundwater treatment plant (GWTP) to the OFCA blower shed was damaged by Austgen during installation. Austgen tried to remove the broken cable from the conduit; however, the cable broke again and could not be removed in its entirety. MWH reported that some of the cable remains in the conduit and must be removed prior to running a second cable. MWH continues to investigate remedial actions to repair the cable.

MWH held the weekly construction coordination meeting on December 20, 2001.

**Topics of Concern:**

- MWH was unable to obtain a groundwater elevation at monitoring well MW-18 due to debris in the well. MW-18 is part of the long term monitoring program.
- The residential well located at 1007 Reder Road could not be sampled because the pump was not operating. This well is part of the long term monitoring program.

**Concern Resolution:**

- MWH proposed to replace MW-18 with MW-17 in the *Revised Long-Term Groundwater Monitoring Plan*. MWH will abandon MW-18 in accordance with the Indiana Administrative Code.

**Upcoming Activities:**

- HIS to complete backfilling and demobilize from the site.
- MWH to re-install the fiber optic cable from the GWTP to the OFCA blower shed.

Signature: Leigh Peters

Date: December 24, 2001

*t:\projects\acs-raos \osr\2001\12\1217.wpd*

**WEEKLY CONSTRUCTION MEETING AGENDA  
FOR DECEMBER 20, 2001 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** December 20, 2001

**MEETING TIME:** 10:00 AM

**MEETING LOCATION:** ACS Site – Site Trailer

**TOPICS:**

Health and Safety Summary (Tom Tinics)

GWTP Status (Lee Orosz)

In-Situ Vapor Extraction (ISVE) System – Off-Site Area (Chris Daly/HIS)

- Status
- Anticipated schedule

Drum Disposal Activities (Travis Klingforth)

- Manifests/Destruction Certificates

Looking Ahead (Tom Tinics)

- Site Hours during Holiday Season

Next Weekly Construction Meeting

- To be determined

Name	Company	Fax Number
CHRIS DAW	MWH	(630) 836-8959
TOM TINKS	MWH	
KEVIN ADLER	VIA PHONE (EPA)	
PETER VAGI	MWH	630 836-8959
TOBY PARISH	HJS	317-541-9436
SCOTT HORNBY	HJS	317-541-9436
LEIGH PETERS	BUSPC	312 346 4781
TRAVIS KLINGBORN	MWH	

**WEEKLY CONSTRUCTION MEETING MINUTES  
FOR DECEMBER 20, 2001 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** December 20, 2001

**MEETING TIME:** 10:00 AM

**MEETING LOCATION:** ACS Site – Site Trailer

**ATTENDEES:**

Chris Daly – MWH  
Travis Klingforth – MWH  
Tom Tinics – MWH  
Peter Vagt – MWH  
Kevin Adler – U.S.EPA (via phone)  
Leigh Peters – BVSPC  
Toby Parish – HIS  
Scott Hernhy – HIS

**TOPICS:**

Health and Safety Summary

As mentioned in last week's meeting, an MWH corporate site health and safety inspection was conducted on December 13, 2001 by Michael Grasso. The written report has been received and no deficiencies were noted.

Heritage Industrial Services (HIS) continues to conduct and document their morning toolbox safety meetings. Toby Parish, an HIS corporate health and safety officer, continues to daily monitor site health and safety. No injuries or other health and safety incidents have occurred in the last week.

Groundwater Treatment Plant (GWTP) Status

The GWTP continues to operate normally. The three On-Site Barrier Wall Extraction System (BWES) wells (EW-10, EW-17, EW-18), five of the Off-Site BWES wells (EW-11, EW-19, EW-20, EW-20B, EW-20C), and the Perimeter Groundwater Extraction System (PGCS) are currently bringing influent to the GWTP.

In-Situ Vapor Extraction (ISVE) System – Off-Site Area

As of the end of the day on December 19, 2001 HIS had completed all of the trenching work for the installation of the conveyance lines connecting to the 42 ISVE wells. All connections had been completed for the 30 wells in the Off-Site Containment Area (OFCA). The 3 air sparge wells in the OFCA will be connected when the required saddles arrive on site. All 42 of the wells are expected to be connected to the blower

shed by the end of the day December 21, 2001 and HIS expects to be substantially complete with the piping installation activities by December 28, 2001 if weather permits. Compaction and compaction testing is scheduled to begin December 21, 2001.

#### Drum Disposal Activities

Original manifests and destruction certificates continue to be received from Onyx Environmental Services for the drum disposal activities performed in November 2001.

#### Looking Ahead

MWH will be retrieving and replacing a damaged fiber optic cable which connects the GWTP and the Off-Site blower shed in the near future. The cable is run through a conduit located 5-6 feet below grade. The conduit will likely be excavated in the northwestern portion of the Off-Site Area near the railroad tracks.

As previously discussed, the Site will be closed to subcontractors on December 24, 25 and December 31, 2001 and January 1, 2002 due to the Holiday Season. Regular hours will resume on January 2, 2002.

#### Next Weekly Construction Meeting

The next weekly construction meeting will be held on Thursday, December 27, 2001.

TMK/PIV/TAL

J:\209\0601 ACS\0202 MWA PM\Meeting Minutes 12-20-01.doc



**Weekly Oversight Summary Report No. 43**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Week of December 24, 2001

**BVSPC O/S Dates:** December 27, 2001 (Ms. Peters)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	4	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Heritage Industrial Services	6	OFCA ISVE Yard Piping Contractor

**Construction Activities**

**Major Activities:**

- Heritage Industrial Services completed backfilling the Off-Site Containment Area in-situ soil vapor extraction system excavations and demobilized from the site.
- Montgomery Watson Harza installed the blower in the Off-Site Containment Area blower shed.
- Montgomery Watson Harza canceled the weekly construction coordination meeting because of construction inactivity at the site.

**Activities Performed:**

Montgomery Watson Harza (MWH) reported that Heritage Industrial Services (HIS) completed connecting all of the Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) wells and air sparge wells. HIS backfilled the trenches at the air sparge wells located to the north of the OFCA blower shed. MWH reported that the slurry installed underneath the piping connections at the blower shed had cured chemically and HIS placed the clay on top of the pipes. The clay was not compacted at the OFCA blower shed; however, MWH stated that 12 inches of compacted clay cover are located underneath the blower shed piping and compaction requirements are not required for the clay located on top of the piping as part of the cover requirements. HIS cleaned out the well lines and demobilized from the site. HIS is scheduled to return in the spring to complete compaction at the trenches and at the blower shed.

MWH installed the blower in the OFCA blower shed. MWH reported that the oxidizer is scheduled for delivery to the site at the end of January.

MWH canceled the weekly construction coordination meeting because of construction inactivity at the site.

**Topics of Concern:**

- MWH was unable to obtain a groundwater elevation at monitoring well MW-18 due to debris in the well. MW-18 is part of the long term monitoring program.
- The residential well located at 1007 Reder Road could not be sampled because the pump was not operating. This well is part of the long term monitoring program.

**Concern Resolution:**

- MWH proposed to replace MW-18 with MW-17 in the *Revised Long-Term Groundwater Monitoring Plan*. MWH will abandon MW-18 in accordance with the Indiana Administrative Code.

**Upcoming Activities:**

- MWH to re-install the fiber optic cable from the GWTP to the OFCA blower shed.
- MWH to install oxidizer for the OFCA ISVE system.

Signature: Leigh Peters

Date: December 31, 2001

*t:\projects\acs-raos\osr\2001\12\1224.wpd*

(142)

12/4/01

*Leigh Peters*

0715 Arrive Onsite. Partly Cloudy, 55°F, light wind from south, southeast

Personnel Present

Lee Orosz MNH

Scott Henly HIS

Dan Carter HIS

Ed Zweibahmer HIS

Greg Truman HIS

Chris Daly MNH

Leigh Peters BVSPC

0730 Observed HIS straightening HDPE 15VE yard piping

0745 Slusser's arrived on OFCA to place sod around EW20-C

Roll 16 Photo 23 facing north showing HIS straightening HDPE pipe on north portion of OFCA.

0820 Roll 16 Photo 24 facing <sup>northwest</sup> ~~northwest~~ showing Slusser's laying sod near EW20-C

0835 left site

1135 Return to Site

1135 spoke with Chris Daly regarding Heritage's activities. He reported Heritage continued to unroll HDPE. HIS may not begin trenching today. May wait to 12/5/01 pending weather.

*Leigh Peters*

(143)

12/4/01

*Leigh Peters*

1145 Tom Tinies MNH reported that vis green and PPE from 15VE well installation were removed from road and sent offsite for disposal.

1200 left site for lunch

1230 Returned to site

1315 ~~BA~~ Tom Tinies reported ORE sampling completed on Friday. Culvert piping underneath soil placed at Power connection on OFCA.

1325 Returned to OFCA to observe HIS

1330 Roll 16 Photo 25 Facing north showing culvert piping placed underneath buried electrical cable and 3 feet of earthen cover.

1325 Roll 16 Photo 26 Facing Northwest of area around EW20-C resodded.

Earlier Tom Tinies reported that Slusser's was to grade the area around EW20-C prior to laying sod. He was not satisfied and grade area is not graded well. May impact runoff.

1340 Slusser's returned to site to bring roller and smooth area around EW20-C.

1350 Walked OFCA with Tom Tinies and Chris Daly. They reported that the gravel and bentonite settled around SVE walls 25 and 41.

1410 Roll 16 Photo 27 Facing north into SVE 25 showing settlement.

*Leigh Peters*

(144)

2/4/01

Lyle Peters

1415 Roll 17 Photo 1 facing northwest into SVE 41 showing scatter and portion of drum that SVE 41 was placed through.

1415 Slosser's began rolling over soil near EN20-C to smooth out area grading Roll 17 Photo 2 facing Northwest showing Slosser's rolling soil near EN20C.

1445 Left site for Day

Lyle Peters  
2/4/01

(145)

12/6/01

Lyle Peters

0725 Arrive on site. Cloudy, 45°F, Wind from South

## Personnel Present

\* Chris Daly MWH

\* Lee Dross MWH

Ed Zweibahner HIS

Danny Carter HIS

\* Scott Hearnly HIS

Dawn van Arsdale HIS

Greg Truitt HIS

\* Todd Lewis MWH

\* Lyle Peters BVSPC

0735 Observed HIS installation of SVE piping activities. Spoke with Chris Daly. He reported that HIS began digging trenches in clay yesterday. Piping has been laid in trenches for eastern trunk of SVE wells. HIS to lay out trunk then connect. Will monitor with PID when HIS digs past clay layer and when HIS begins connecting to wells. ~~HIS~~ MWH reported that HIS damaged electrical conduit line near SVE 38. Conduit runs from EN20C to OFCA Blower shed. HIS damaged line around 3pm on wed. Arrived to repair line. Electrical line was not energized. Arrived to be on site today to investigate damage.

Lyle Peters

146

12/6/01

Boyd E Peters

0755 Roll 17 Photo 3 Facing northwest showing  
HIS connecting yard piping to header  
at blower shed

Roll 17 Photo 4 Facing Northwest showing  
HDPE laid in ISVE trench. HIS trenching

0805 HIS damaged electrical conduit at SVE 34.

0816 Roll 17 Photo 5 Facing northwest looking  
down showing damaged electrical  
conduit at SVE 34 trench

0815 Roll 17 Photo 6 Facing north showing  
damaged electrical conduit at SVE 36  
near SVE 36

1000 Weekly Construction Meeting

Personnel in Attendance - \* on previous list plus:

Duke Truckump HIS

Travis Klingforth MWH

Peter Vugt MWH

Tom Timms MWH

Kevin Adler EPA (via phone)

Health & Safety

• HIS had site specific H&S training

• HIS contracted to hold daily toolbox meeting

- have not held as of yet. Will begin and  
will document

• HIS damaged buried electrical conduit.

Boyd E Peters

147

12/6/01

Boyd E Peters

conduit not energized. to be repaired

- Reauthorized safety equipment - hard hats + glasses
- No smoking w/in fence line

GWTP

- Closed recirculating. Discharged to wetlands 12/3/01
- Power off in OFCA since HIS working - no pumping OFCA
- Pumping from ONCA wells - 25 gpm.
- To finish general maintenance today on equipment
- Plant operating fine.

BWES

- Resodded and replaced erosion controls at EW 20C.
- Was operating OFCA BWES until HIS work on ISVE

ISVE

- Unrolled piping and started trenching + installing HDPE
- goal of 10 wells per day. Second crew for hookup
- line testing possible today
- still scheduled for completion 12/21/01.

Drum Disposal

- Certs of destruction received for overpack drums
- Received manifests but no certs of destruction  
for roll-offs

ORC

- 6th & final round of sampling completed 11/30/01
- Results of program expected beginning of 2002

Boyd E Peters

(148)

12/6/01

Zeph Peters

Schedule

- work Wed, Thurs, Friday Weeks of 24th + 31st.
- Holiday party 12/13/01

Next Mtg: 12/13/01

1030 Mtg adjourned.

1050 Reviewed MWH documents

1115 Returned to OFCA. HIS reported that they were moving material under clay near SVE34 and had PID reading of 23 ppm. HIS stopped work, bett area.

1120 Observed HIS prepare for fit testing of respirators with Dilind. Safety. HIS began developing an exclusion zone

1200 Left site for lunch

1230 Return to site - review of oversight reports of Nov.

1310 observe HIS change into level C PPE for person in trench. Backhoe operator to wear half mask respirator according to HIS H+S Manager.

1320 Roll 17 Photo 7 Facing southwest showing HIS inserting well

1325 Roll 17 Photo 8 facing east showing hole cut into SVE 31. Note lines for manhole inside well riser for inserting

1410 Spoke with Larry Campbell regarding

(149)

Zeph Peters

site activities. Specifically - lack of preparedness at HIS, no submittals regarding scope of work submitted to BVSOC by MWH health and safety issues.

1505 MWH hold H+S meeting for HIS - T Times

Facilitated PPE and exclusion zones and hazards. MWH to work with HIS on amount of maturing and depths to be removed in trenches.

1535 Mtg concluded. Spoke with Tom Thills and Scott of HIS regarding HIS. HIS looking into have a separate dedicated HIS person on site. Reiteration that MWH responsible for HIS safety and to make sure that it is clear as to requirements. MWH to hold a second H+S meeting with HIS on Friday morning.

MWH thinking about obtaining slope to well at last 10 feet before well. ~~What if~~ would minimize excavation in native soil.

Reason for depth of trenches today was attributed to HIS not planning for fall and length between OFCA blower shed and wells.

1615 Left Site for Day

Zeph Peters  
12/6/01

(150)

12/11/01

Toby E Peters

0650 Arrive onsite. Partly cloudy 35°F light breeze from South.

### Personnel Present

Chris Daly MWH

David Robinson HHS

Dan Carter HHS

Ed Zucibahoner HHS

Toby Parish HHS

Scott Heanly HHS

Ltigh Peters BNSPC

Greg Truran HHS

Dawn van der Schaak HHS

0705 Toby Parish of HHS held morning safety meeting. Reviewed H-S Manual. HHS to wear beatties in exposed areas and during other activities. Toby Parish to conduct air monitoring continuously. Will use PID and CGL.

0720 Health and safety mtg adjourned.

0735 Observe HHS prepare for daily activities on a/c. C. Daly reported no additional trenching activities on Friday 12/7/01. Connected 6 SVE wells and pressure tested lines on 12/10/01. HHS has backfilled with clay or connected wells they have not compacted over yet.

Toby E Peters

(151)

12/11/01

Toby E Peters

0800 Roll 17 Photo 9 Facing northeast showing HDPE piping connection to SVE-31. Austgen on-site repairing electrical conduit that was damaged by HHS. C. Daly reported that conduit was repaired 12/10/01 and Austgen will be running the cable today.

0930 Roll 17 Photo 10 Facing north showing HHS replacing clay for cover over SVE piping.

1015 HHS laid piping for 2 air sparge lines in eastern trench. Earlier C. Daly reported that HHS should be able to achieve full in slope to wells while staying primarily in clay layer. For wells north of blower shed. MWH to look at slope in pipe to wells in K-Parva.

1045 Roll 17 Photo 11 facing north showing piping header at blower shed and ~~beatties~~ <sup>to</sup> SVE-13. C. Daly reported that piping for well SVE-13 will cross yard piping for remainder of wells in central trunk. HHS would not be able to establish good wells at header if they placed piping for remainder of trunk to the west of SVE-13. Piping will split around SVE-13.

1145 Left site for lunch.

1220 Return to site. Observed HHS complete welds at blower shed and place bentonite grout.

(152)

12/11/01

Lyle Peters

for piping connection to SVE wells

1235 Roll 17 Photo 12 facing west showing HIS  
constructing land bridge over swale 5.

Note 8 inch diameter culvert pipe

1305 HIS begun excavating for central trunk  
Decided to have ~~transmission~~ piping on east of SVE 13

1315 Roll 17 Photo 13 facing northeast at excavation  
between Blower Shed and SVE 13 showing  
HIS performing air monitoring with PID

1320 C. Daly of MWH began monitoring boundary  
of ~~to~~ <sup>SP</sup> middle trench with PID.

1325 Roll 17 Photo 14 facing southeast showing  
repaired electrical conduit at SVE-34  
Observed HIS excavate, install saddles and  
flanges

1400 Spoke with Larry Campbell regarding site activities

1408 Spoke with K. Adler regarding improvement  
at site with respect to site activities.

Continue to observe site activities

1510 1st site for day

~~Lyle Peters~~  
12/11/01

(153)

12/13/01

Lyle Peters

0825 Arrive on site, 45°F cloudy light breeze  
from south

## Personnel Present

\* Lee Drossz MWH

Dave Robinson HIS

\* Chris Daly MWH

\* Toby Partsh HIS

Ed Zweibahmer HIS

Dan Carter HIS

\* Scott Healey HIS

Duke Trunkamp HIS

Dawn van Arsdale HIS

Greg Turan HIS

Michael Grasso MWH

\* Leigh Peters BUSPC

0835 observed HIS work on OFCA. Eastern trench  
north of OFCA blower shed has been backfilled.

0845 Roll 17 Photo 15 facing southwest showing  
~~to~~ <sup>SP</sup> land bridge in swale 5 and ponded  
water

0855 Spoke with Chris Daly of MWH. He reported  
that they observed hits on PID yesterday.  
Now that connections from wells to Blower  
Shed complete - vapors now in blower shed  
PID readings at 30 ppm. Pipes are closed



12/13/01

Jeff Peters

with duct tape. MWH ordered covers for pipes. To be delivered today or tomorrow. Blower shed doors open with caution tape to vent. PID reads 0 ppm at door.

No readings observed during trenching and well connection activities. Trenching within clay or at base of clay layer.

C. Daly also reported that HIS put bentonite into SVE BS and 41 to replace settled grout.

10.10

Weekly Construction Meeting

Attendees x on previous list plus

Rob Adams MWH

Tom Trices MWH

Peter Vought MWH

Travis Kingforth MWH

Kevin Adler EPA

GWTP

- continue pumping from DGCS and ONCA extraction wells.

- GWTP down for 10 hrs due to crossing of electrical wires. Pump gun repaired.

- To start pumping from ONCA when electrical energized and HIS activities complete.

- MWH studying pumping and water levels on ONCA

- Still discharging from Drainage structures 2 + 3

Jeff Peters

12/13/01

Jeff Peters

HIS

- MWH corporate safety officer performed audit today. MWH passed audit.

- MWH received EPA comments regarding ISVE.

- HIS lack of preparedness attributed to not planning on installing below clay. MWH and HIS developed grades. HIS safety officer now present.

- Fit test, respirators provided 12/6/01 for local union workers. They were supposed to have prior to working on site.

- HIS conducting tool box mtgs.

- K-P to have zero grade or slight fall if possible.

- Swale 5 to be filled prior to liner.

ISVE

- HIS to construct 20 wells by end of week.

- K-P area activities to start next week.

- Vapors in blower shed - doors open, restricted and continue to monitor.

- HIS hopes to be done by 12/21/01 to determine next week.

Drums

MWH received approximately one-half of certifications.

Next meeting December 20, 2001.

Scheduled meeting 12/27/01

1050 Mtg adjourned

Jeff Peters

156

12/13/01

Lyle Peters

- 1100 On OFCA observed HIS activities
- 1150 spoke with Larry Campbell via phone regarding current site activities.
- 1240 Roll 17 Photo 16 facing north west showing erosion from OFCA cover along west portion of cover into swale 1
- 1245 Roll 17 Photo 17 facing north showing middle 15VE yard piping trench
- 1255 Roll 17 Photo 18 facing north showing backfilled eastern trench and yard piping leading to it.
- 1300 C. Daly began placing caps in OFCA blower shed on piping to SVE wells.
- 1310 Roll 17 Photo 19 facing northeast showing yard piping connections at the OFCA blower shed
- 1350 Left site for day

~~Lyle Peters~~  
12/13/01

157

12/18/01

Lyle Peters

0720 Arrive on site. Partly Cloudy, 35°F

No wind present

Personnel Present

Chris Daly MNH

Toby Parish HIS

Ed Zwerbach HIS

Dawn Carter HIS

Dawn van Arsdale HIS

Greg Truman HIS

Dave Robinson HIS

Scott Heavly HIS

Lyle Peters BUSPL

Lee Dross MNH

0725 On OFCA, C. Daly reported HIS did not work on Friday or Monday morning due to weather. HIS excavating western trench today; staking in the clay layer. HIS hooked up 3 wells in central trench yesterday. Connections for trench in middle made at Blower Shed. HIS to continue all excavation today and tomorrow and continue laying pipe. No PID readings greater than 0 ppm. HIS capping piping in Blower Shed as wells are connected. HIS expect to have piping laid by end of week.

(158)

12/18/01

## Job 2 Photos

0810

Roll 17 Photo 20 facing north showing HIS welding pipe at Blower Shed and connection to SVE B underneath rest of piping to central trunk.

0820

Roll 17 Photo 21 facing northwest showing HIS excavate trench to SVE 17 around SVE 16.

0835

Observed HIS conduct OFCA ISVE yield piping installation activities.

0855

Roll 17 Photo 22 facing southeast showing HIS connecting saddle at SVE 29.

0930

Reminded C. Daly of MWH that HIS needs to perform air monitoring when connecting saddles to wells especially if muni ball is not present in well.

1000

Toby Parish of HIS stated that HIS would pick up a second muni ball plug.

1130

Blower shed is located further west than on conceptual. K-P trunk runs straight to SVE 3 instead of SVE 9. Trenching will be to SVE 3 and then to branch to wells.

1140

Left site for lunch

1215

Return to site

1300

Observed HIS begin excavating trenches in K-P Area. Excavating at grade from Blower

(159)

shed across land bridge. HIS continued excavating at grade until below clay cover. PID reading of 0.2 ppm. HIS backfilled and increased grade of excavation in order to remain in the clay cover. Observed excavation in K-P area.

1420 Observed HIS weld piping at blower shed

1450 Roll 17 Photo 23 facing northwest showing piping placed for western trench north of blower shed.

1500 Left site for day

~~Job 2 Photos~~  
~~12/18/01~~

[illegible]

0810 Arrive on site, Sunny, 35°F, light wind from SW

* Chris Daly	MWH
* Toby Parish	HIS
Greg Truran	HIS
Dan Carter	HIS
Dawn VanArdale	HIS
David Robinson	HIS
Ed Zwickbamer	HIS
* Scott Hernly	HIS
Tim Kirkland	Austage
Lee Orosz	MWH
* Leigh Peters	BVSFC

0825 On OFCA observed C. Daly locating trenches and wells on K-Parca with GPS equipment. Observed that majority of trenches have been backfilled north of blower shed except at the connections at blower shed. Backfilling not complete at air sparge points. These have not be connected to shed, saddles not yet available as of Tuesday. Some backfilling still needed at western SVE wells north of blower shed. Observed HIS fixing K-P area piping at the Blower shed. HIS completed trenching on Wednesday.

(2)

12/20/01

J. E. Peters

0840

Spoke w. C. Daly - All wells North of Blower shed connected. He reported that getting 3 truck loads of clay to complete land bridge. Also stated that the saddles for the air sparge wells have not been delivered. C. Daly reported that all trenching in K-P area conducted within clay layer or at base of clay layer.

0905

Roll 17 Photo 24 facing southeast showing eastern trenches and piping in K-P area.

1010

Weekly Construction Meeting

Attendees \* on previous list plus

Tom Tinies MWH

Travis Klingforth MWH

Peter Vagt MWH

Kevin Adler USEPA via phone

### H+S

- HIS conducting morning tool box H+S meetings
- No injuries nor incidents

### GWTP

- Pumping from all ONCA wells, OFCA wells 11, 19, 20B and 20C. PGCS in auto mode.
- Operating at 55 gpm, GWTP capacity is 60 gpm
- MWH taking water level measurements on ONCA at all OFCA SVE wells. Free product

J. E. Peters

(3)

12/20/01

J. E. Peters

found in OFCA SVE wells.

### ISVE

- HIS connected all SVE wells North of blower shed expect to connect K-P wells by end of week.
- Waiting for saddles for air sparge points
- Majority of north side is backfilled. HIS may begin compaction and moisture testing Fri.
- HIS to place flow fill underneath piping connections at blower shed, in order to support piping for cover and clay compaction requirements.
- HIS expected next week unless adverse weather.

### Drum Disposal

- MWH still receiving manifests

### Looking Ahead

- HIS possibly out next week
- Fiber optic cable from Blower shed to GWTP was damaged during installation. MWH investigating how to repair line. May require excavation - lines between 4 and 6 feet deep. MWH looking to begin repairs mid January

### Next Meeting December ~~20, 2001~~ 27, 2001.

- 1100 Spoke with T. Tinies regarding fiber optic repairs. Austgen on site trying to pull out fiber optics. MWH thinks that the conduit is plugged with fiber optic cable around railroad track.

J. E. Peters

④

12/20/01

J. S. Peters

MWH will provide additional info as available

1200

Left site

1225

Return to site. Observed H/S continue to lay piping in K-P Area

1230

Roll 17 Photo 25 facing northwest showing backfilled trench on western side of OFCA. Note air sparge line crossing over pipes to central trunk, then running down central trunk to air sparge westernmost Heritage Ind serv. has completed 9 of the 12 K-P connections at the Blower Shed.

1245

Roll 17 Photo 26 facing south showing H/S working with K-P piping and the piping laid in the trench and over the land bridge. Observed H/S backfill wells north of Blower Shed.

1250

Roll 17 Photo 27 facing northeast showing H/S backfilling at SVE 27

1255

Left site for day

J. S. Peters  
12/20/01

⑤

12/27/01

J. S. Peters

OBIS Arrive on site 20°F.

Personnel on site

Chris Daly

MWH

Lee Orosa

MWH

Todd Lewis

MWH

Tom Tinics

MWH

Ligh Peters

BVSPC

0830 Went to OFCA with C. Daly and T. Tinics

0835 Roll 18 Photo 1 facing west showing backfill at OFCA below crushed north side.

Roll 18 Photo 2 facing south showing backfill at west side of blower shed and clay land bridge and piping cover

0840 Roll 18 Photo 3 facing north west showing backfill at westernmost air sparge well.

0845 Roll 18 Photo 4 facing west of interior of blower shed and knock out tank

Roll 18 Photo 5 facing east showing blower installed in OFCA blower shed.

C. Daly and T. Tinics reported all trenches compacted except for air sparge wells and around blower shed. The excavations have been backfilled, but not compacted. H/S to return in spring to compact. Patrick Engineering on site on 12/21/01 and performed compaction and moisture testing

J. S. Peters

⑥

12/27/01

Jeff E. Pilon

Patrick tested every 50 linear foot and MWH had Patrick sample at other locations in trenches to wells. K-P area not tested for compaction. Will be performed in spring. HTS will need to remove clay at blowershed connections and compact in spring. North area of OFCA passed over 90% of compaction tests and possibly more depending on the proctor test to be used as standard. MWH to determine.

0850

Weekly Construction Meeting Cancelled. Next meeting 1/3/02. HTS to return to site to demobilize equipment this week

0910

Left site for day

Jeff E. Pilon  
12/27/01





Site: American Chemical Services, Inc.  
 Proj. #: 46526  
 Roll: 16 Photo #23  
 Date: 12-04-01 Time: 07:45  
 Photographer: Leigh Peters  
 Description: Photo facing north showing Heritage Industrial Services straightening coiled pipe for OFCA ISVE yard piping installation.



Site: American Chemical Services, Inc.  
 Proj. #: 46526  
 Roll: 16 Photo #24  
 Date: 12-04-01 Time: 08:20  
 Photographer: Leigh Peters  
 Description: Photo facing northeast showing Slusser's laying sod near OFCA extraction well EW-20C.





Site: American Chemical Services, Inc.  
 Proj. # 46526  
 Roll: 16 Photo #25  
 Date: 12-04-01 Time: 13:30  
 Photographer: Leigh Peters  
 Description: Facing north showing culvert piping  
 placed underneath buried electrical line  
 and earthen berm in swale 3, near Colfax  
 Ave.



Site: American Chemical Services, Inc.  
 Proj. # 46526  
 Roll: 16 Photo #26  
 Date: 12-04-01 Time: 13:35  
 Photographer: Leigh Peters  
 Description: Photo facing northwest showing sod  
 placed near OFCA extraction well EW-  
 20C.





Site: American Chemical Services, Inc.

Proj. # 46526

Roll: 16 Photo #27

Date: 12-04-01 Time: 14:10

Photographer: Leigh Peters

Description: Photo facing north looking into SVE-25  
showing the settlement of the bentonite  
grout.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 17 Photo #1

Date: 12-04-01 Time: 14:15

Photographer: Leigh Peters

Description: Photo facing northwest showing settled  
grout around OFCA ISVE well SVE-41.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 17 Photo #2

Date: 12-04-01 Time: 14:15

Photographer: Leigh Peters

Description: Photo facing northwest showing Slusser's rolling sod near OFCA extraction well EW-20C.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 17 Photo #3

Date: 12-06-01 Time: 07:55

Photographer: Leigh Peters

Description: Photo facing northwest showing HIS connecting ISVE yard piping to header at the OFCA blower shed.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 17 Photo #4

Date: 12-06-01 Time: 07:55

Photographer: Leigh Peters

Description: Photo facing northeast showing the ISVE yard piping laid in easternmost trunk north of OFCA blower shed. HIS is trenching to additional ISVE wells.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 17 Photo #5

Date: 12-06-01 Time: 08:10

Photographer: Leigh Peters

Description: Photo facing northwest showing damaged electrical conduit at SVE-34.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 17 Photo #6

Date: 12-06-01 Time: 08:15

Photographer: Leigh Peters

Description: Photo facing north showing damaged electrical conduit at SVE-36.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 17 Photo #7

Date: 12-06-01 Time: 13:20

Photographer: Leigh Peters

Description: Photo facing southwest showing HIS inerting well in order to drill hole for piping connection.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 17 Photo #8

Date: 12-06-01 Time: 13:25

Photographer: Leigh Peters

Description: Photo facing east showing hole cut into SVE-31. "Muni-ball" placed into well for inerting process.



Site: American Chemical Services, Inc.

Proj. #: 46526

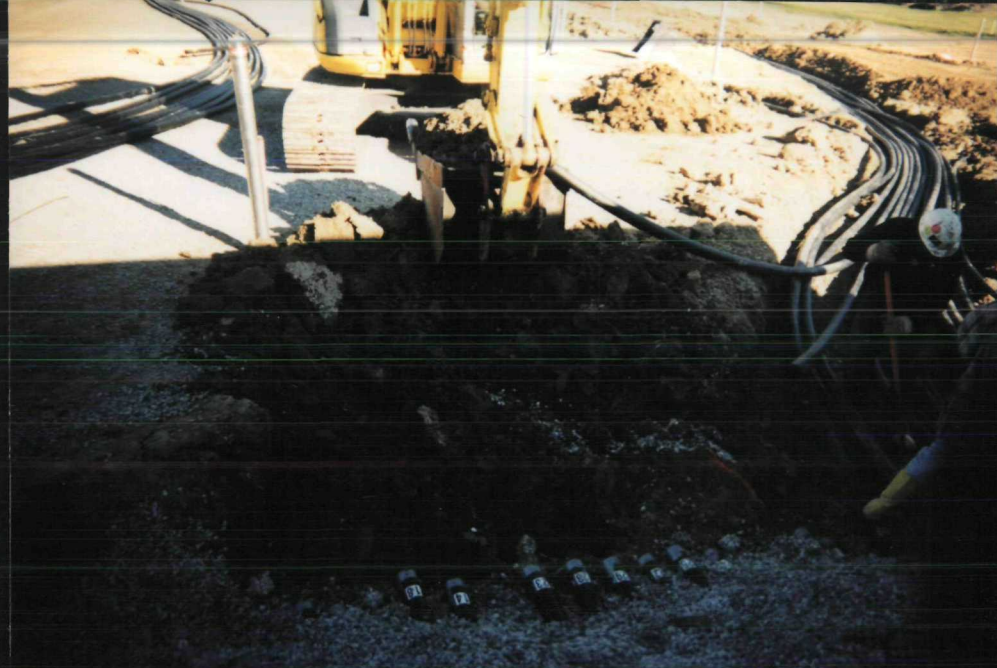
Roll: 17 Photo #9

Date: 12-11-01 Time: 08:00

Photographer: Leigh Peters

Description: Photo facing northeast showing HDPE piping connection at SVE-31.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 17 Photo #10

Date: 12-11-01 Time: 09:30

Photographer: Leigh Peters

Description: Photo facing north showing HIS replacing the clay for the cover over the ISVE yard piping.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 17 Photo #11

Date: 12-11-01 Time: 10:45

Photographer: Leigh Peters

Description: Photo facing north showing piping header at OFCA blower shed and SVE-13.





Site: American Chemical Services, Inc.  
 Proj. #: 46526  
 Roll: 17 Photo #12  
 Date: 12-11-01 Time: 12:35  
 Photographer: Leigh Peters  
 Description: Photo facing west showing HIS  
 constructing land bridge over swale 5.  
 Note placement of 8-inch-diameter  
 culvert piping. (Arrow)

Site: American Chemical Services, Inc.  
 Proj. #: 46526  
 Roll: 17 Photo #13  
 Date: 12-11-01 Time: 13:15  
 Photographer: Leigh Peters  
 Description: Photo facing northeast of excavation  
 between blower shed and SVE-13  
 showing HIS personnel performing air  
 monitoring with a PID.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 17 Photo #14

Date: 12-11-01 Time: 13:25

Photographer: Leigh Peters

Description: Photo facing southeast showing repaired electrical conduit at SVE-34.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 17 Photo #15

Date: 12-13-01 Time: 08:45

Photographer: Leigh Peters

Description: Photo facing southwest showing land bridge over swale 5 and the water collecting in swale upgradient of the land bridge.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 17 Photo #16

Date: 12-13-01 Time: 12:40

Photographer: Leigh Peters

Description: Photo facing northwest showing erosion from OFCA cover along the western portion of the cover into swale 1.

Site: American Chemical Services, Inc.

Proj. #: 46526

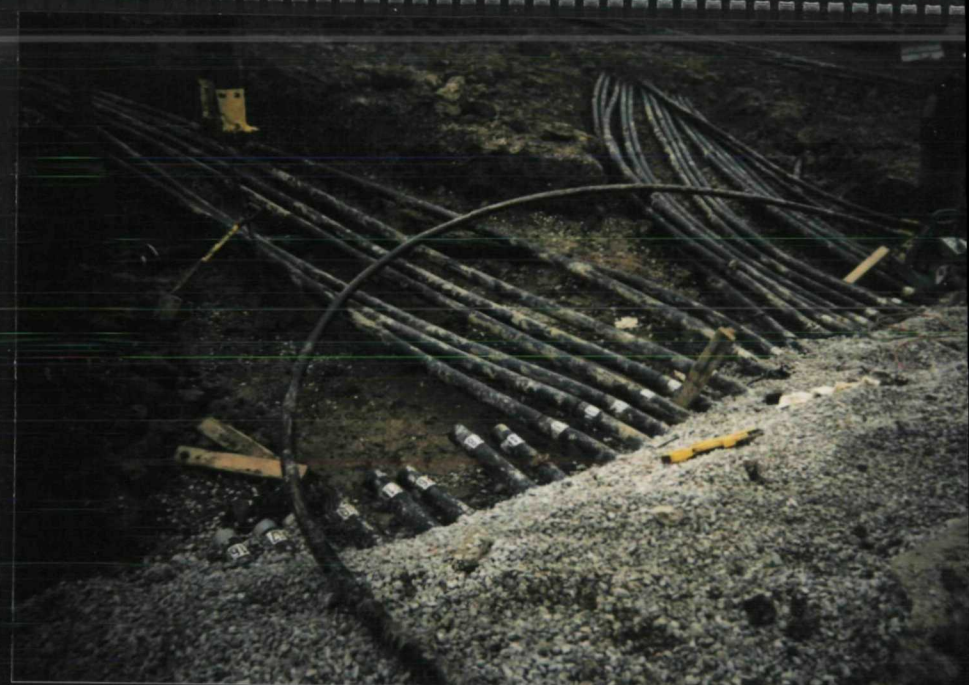
Roll: 17 Photo #17

Date: 12-13-01 Time: 12:45

Photographer: Leigh Peters

Description: Photo facing north showing middle ISVE yard piping trench located north of the OFCA blower shed. Material excavated from below clay is placed on visqueen.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 17 Photo #18

Date: 12-13-01 Time: 12:45

Photographer: Leigh Peters

Description: Photo facing north showing backfilled eastern trench and ISVE yard piping connected to eastern SVE wells.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 17 Photo #19

Date: 12-13-01 Time: 13:10

Photographer: Leigh Peters

Description: Photo facing northeast showing ISVE yard piping connections at the OFCA blower shed.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 17 Photo #20

Date: 12-13-01 Time: 08:10

Photographer: Leigh Peters

Description: Photo facing north showing HIS welding pipe at OFCA blower shed and connection to SVE-13 that runs underneath the piping to middle trunk.

Site: American Chemical Services, Inc.

Proj. #: 46526

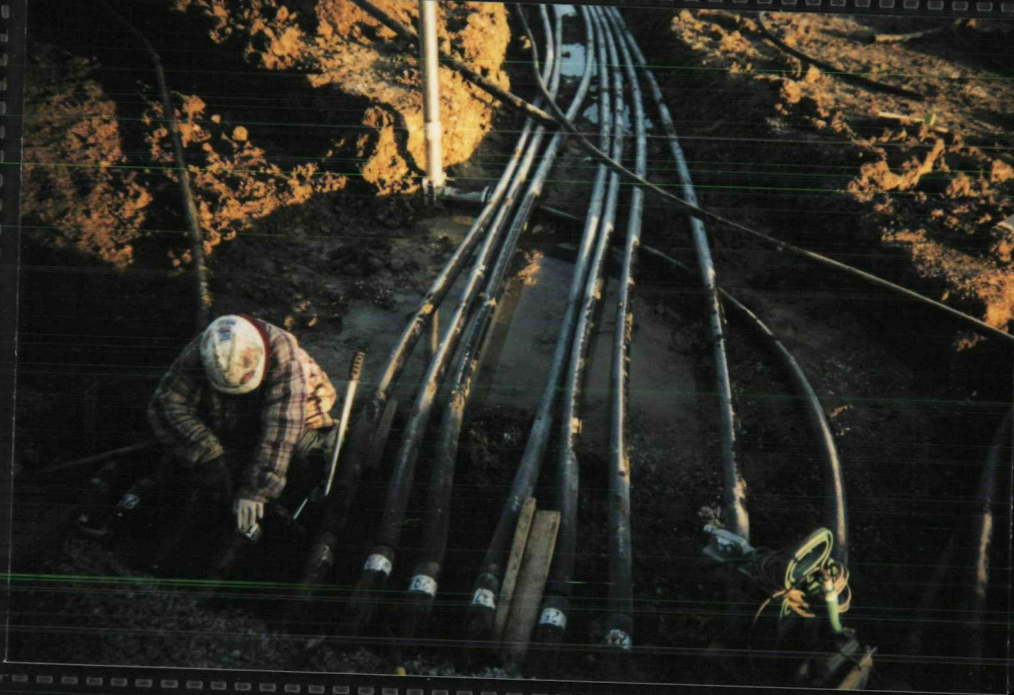
Roll: 17 Photo #21

Date: 12-13-01 Time: 08:20

Photographer: Leigh Peters

Description: Photo facing northwest showing HIS excavating the trench to SVE-17 around SVE-13.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 17 Photo #20

Date: 12-13-01 Time: 08:10

Photographer: Leigh Peters

Description: Photo facing north showing HIS welding pipe at OFCA blower shed and connection to SVE-13 that runs underneath the piping to middle trunk.



Site: American Chemical Services, Inc.

Proj. #: 46526

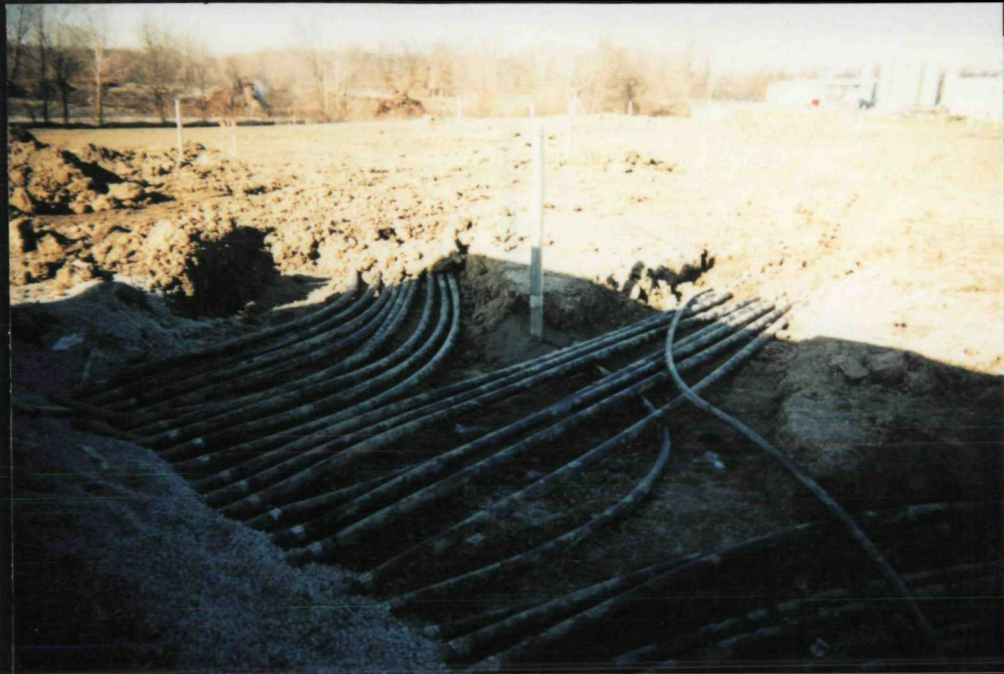
Roll: 17 Photo #21

Date: 12-13-01 Time: 08:20

Photographer: Leigh Peters

Description: Photo facing northwest showing HIS excavating the trench to SVE-17 around SVE-13.





Site: American Chemical Services, Inc.  
 Proj. #: 46526  
 Roll: 17 Photo #24  
 Date: 12-20-01 Time: 09:05  
 Photographer: Leigh Peters  
 Description: Photo facing southeast showing eastern  
 trenches and piping in the K-P area.

Site: American Chemical Services, Inc.  
 Proj. # 46526  
 Roll: 17 Photo #25  
 Date: 12-20-01 Time: 13:30  
 Photographer: Leigh Peters  
 Description: Photo facing northwest showing  
 backfilled trench on western side of  
 OFCA. Note air sparge line placed over  
 piping in the central trench.





Site: American Chemical Services, Inc.

Proj.# 46526

Roll: 17 Photo #26

Date: 12-20-01 Time: 12:45

Photographer: Leigh Peters

Description: Photo facing south showing HIS working with K-P piping and the piping placed in trench and over land bridge.



Site: American Chemical Services, Inc.

Proj. # 46526

Roll: 17 Photo #27

Date: 12-20-01 Time: 12:50

Photographer: Leigh Peters

Description: Photo facing northeast showing HIS backfilling trench for ISVE yard piping at SVE-27.